In the Claims:

Please cancel claims 31, 32, 40, 43, and 44.

Please amend claims 33-39, 41, 42, and 45-51 as follows.

31. (Cancelled)

32. (Cancelled)

33. (Currently Amended) A method of making a magnetic read head which has an air bearing surface (ABS), comprising the steps of:

making a spin valve sensor including the steps of:

forming a ferromagnetic pinned layer that has a magnetic moment;

forming a pinning layer exchange coupled to the pinned layer for pinning the magnetic moment of the pinned layer;

forming a free layer;

forming a nonmagnetic conductive spacer layer between the free layer and the pinned layer;

forming a capping layer with the free layer being located between the spacer layer and the capping layer;

forming the free layer with an oxidized film portion and an unoxidized film portion with the oxidized film portion being located between the unoxidized film portion and the capping layer;

forming a copper layer between the oxidized film portion of the free layer and the capping layer;

forming nonmagnetic nonconductive first and second read gap layers;

forming the spin valve sensor between the first and second read gap layers;

forming ferromagnetic first and second shield layers; and

forming the first and second read gap layers between the first and second shield layers,

~~A method as claimed in claim 32~~ wherein the unoxidized film portion of the free layer is formed as a nickel iron film and the oxidized film portion of the free layer is formed as a nickel iron oxide film.

34. (Currently Amended) ~~A~~ The method as claimed in claim 33 further including forming the copper layer fully oxidized or with an oxidized film portion and an unoxidized film portion.

35. (Currently Amended) ~~A~~ The method as claimed in claim 33 wherein the pinning layer is formed of platinum manganese.

36. (Currently Amended) ~~A~~ The method as claimed in claim 35 wherein the making of the spin valve sensor further includes the steps of:

forming first and second seed layers with the first seed layer composed of nickel manganese oxide and the second seed layer composed of tantalum with the second seed layer being located between the first seed layer and the pinning layer; and

forming the first read gap layer of aluminum oxide.

37. (Currently Amended) ~~A~~ The method as claimed in claim 36 wherein the copper layer is formed 4-10 A thick.

38. (Currently Amended) ~~A~~ The method as claimed in claim 37 wherein the capping layer is formed of tantalum.

39. (Currently Amended) A The method as claimed in claim 38 wherein a forming of the pinned layer comprises the steps of:

forming ferromagnetic first and second antiparallel (AP) pinned films with the first AP film interfacing the pinning layer; and

forming an antiparallel (AP) coupling film between the first and second AP films.

40. (Cancelled)

41. (Currently Amended) A method of making a magnetic read head which has an air bearing surface (ABS), comprising the steps of:

making a spin valve sensor including the steps of:

forming a ferromagnetic pinned layer that has a magnetic moment;

forming a pinning layer exchange coupled to the pinned layer for pinning the magnetic moment of the pinned layer;

forming a free layer;

forming a nonmagnetic conductive spacer layer between the free layer and the pinned layer;

forming a capping layer with the free layer being located between the spacer layer and the capping layer;

forming the free layer with an oxidized film portion and an unoxidized film portion with the oxidized film portion being located between the unoxidized film portion and the capping layer; and

forming a copper layer between the oxidized film portion of the free layer and the capping layer;

forming nonmagnetic nonconductive first and second read gap layers;

forming the spin valve sensor between the first and second read gap layers;

forming ferromagnetic first and second shield layers; and

forming the first and second read gap layers between the first and second shield layers,

wherein the unoxidized film portion of the free layer is formed as a cobalt iron film and the oxidized film portion of the free layer is formed as a cobalt iron oxide film, and

~~A method as claimed in claim 40~~ wherein the free layer is further formed with a nickel iron film with the cobalt iron film being located between the spacer layer and the nickel iron film.

42. (Currently Amended) ~~A~~ The method as claimed in claim 41 wherein the free layer further includes forming a nickel iron oxide film between the nickel iron film and the cobalt iron film.

43. (Cancelled)

44. (Cancelled)

45. (Currently Amended) A method of making magnetic head assembly that has an air bearing surface (ABS), comprising the steps of:

making a write head including the steps of:

forming ferromagnetic first and second pole piece layers in pole tip, yoke and back gap regions wherein the yoke region is located between the pole tip and back gap regionforming a nonmagnetic nonconductive write gap layer between the first and second pole piece layers in the pole tip region;

forming an insulation stack with at least one coil layer embedded therein between the first and second pole piece layers in the yoke region; and

connecting the first and pole piece layers at said back gap region; and making a read head including the steps of:

forming noumagnetic nonconductive first and second read gap layers; forming a spin valve sensor between the first and second read

gap layers;

forming the first and second read gap layers between the first shield layer and the first pole piece layer; and

a making of the spin valve sensor comprising the steps of:

forming a ferromagnetic pinned layer that has a magnetic moment;

forming a pinning layer exchange coupled to the pinned layer for pinning the magnetic moment of the pinned layer;

forming a free layer;

forming a nonmagnetic conductive spacer layer between the free layer and the pinned layer;

forming a capping layer with the free layer being located between the spacer layer and the capping layer;

forming the free layer with an oxidized film portion and an unoxidized film portion with the oxidized film portion being located between the unoxidized film portion and the capping layer; and

forming a copper layer between the oxidized film portion of the free layer and the capping layer,

~~A method as claimed in claim 43~~ wherein the unoxidized film portion of the free layer is formed as a nickel iron film and the oxidized film portion of the free layer is formed as a nickel iron oxide film.

46. (Currently Amended) A The method as claimed in claim 45 further including forming the copper layer fully oxidized or with an oxidized film portion and an unoxidized film portion.

47. (Currently Amended) A The method as claimed in claim 45 wherein the pinning layer is formed of platinum manganese.

48. (Currently Amended) A The method as claimed in claim 47 wherein the making of the spin valve sensor further includes the steps of:

forming first and second seed layers with the first seed layer composed of nickel manganese oxide and the second seed layer composed of tantalum with the second seed layer being located between the first seed layer and the pinning layer; and

forming the first read gap layer of aluminum oxide.

49. (Currently Amended) A The A method as claimed in claim 48 wherein the copper layer is formed 4-10 A thick.

50. (Currently Amended) A The method as claimed in claim 49 wherein the capping layer is formed of tantalum.

51. (Currently Amended) A The method as claimed in claim 50 wherein a forming of the pinned layer comprises the steps of:

forming ferromagnetic first and second antiparallel (AP) pinned films with the first AP film interfacing the pinning layer; and

forming an antiparallel (AP) coupling film between the first and second AP films.